UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,855	11/19/2003	Francois Kubica	245493US41X CONT	5604

			EXAMINER
22850	7590	11/23/2005	NGUYEN, THU V

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ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)
Office Action Summary	10/715,855	KUBICA, FRANCOIS
	Examiner	Art Unit	
	Thu Nguyen	3661	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*31 August 2005 and 30 June 2005*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☒ Certified copies of the priority documents have been received in Application No. <u>09/863,894</u>.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

The response file on August 5, 2005 and the amendment filed on June 30, 2005 has been

entered. By this amendment, all claims 1-30 are now still pending in the application.

Specification

1.   The disclosure is objected to because of the following informalities:

In the specification page 6, line 11, the "link 16" should be corrected to "link 18" to

correspond to the numbering in fig.3

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pages (US

5,774,818) in view of Leslie et al (US 4,750,127) and further in view of Trikha (US 6,003,811).

As per claim 1-2, 6, 11, Pages teaches a system for operating an aircraft, the system

comprising: a navigation computer 12 (fig.4) and a flight control computer 13 (fig.4). The

navigation computer 12 (fig.4) comprises: a first input (from 16 (fig.4)) to receive guidance

instruction including position points (col.5, lines 22-35); a second input (from 15 (fig.4))

configured to receive guidance parameters (col.5, lines 36-38); an output (to PA 13 (fig.4)) to

output automatic pilot instruction (position Ln, Mn and route Rn of the next flight point) (col.5, lines 43-46). The flight control computer comprises: a second input generator (connected to 12 (fig.4)) to receive to receive automatic pilot instructions (col. 5, lines 43-46); a command generator to generate a first plurality of operating commands based on the automatic pilot instructions in an automatic pilot mode (col.5, lines 47-52). Pages does not explicitly disclose that the first input to the navigation computer includes the heading, vertical speed and altitude, and a first input of the flight control computer 13 (fig.4). However, Pages teaches that the first input to the navigation computer 12 includes the position (L, M) associated with a route constraint (col.5, lines 26-30), and Leslie teaches including altitude in the first input to the flight path input (col.2, lines 60-68; col.3, lines 1-4) moreover, including other parameters such as vertical speed, heading, etc. for the control of the aircraft would have been well known. Moreover, Pages teaches an interface 18 (fig.4) capable of displaying suggestion to the user of the control the pilot should make, and in manual mode, the pilot can input such the control according to the suggestion (col.5, lines 52-55; col. 4, lines 51-54). Further, Trikha teaches a known flight control computer 26 (fig.1) capable of processing both manual input 18 (fig.1) and autopilot input 25 (fig.1) control instructions. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the first manual input interface taught by Trikha to the flight control computer 13 (fig.4) of Pages in order to allow the flight control computer to provide commands to the actuators according to the manual input data.

As per claim 3, Pages teaches a third input (from 15 (fig.4)) for receiving control parameters (col.5, lines 47-49).

As per claim 4-5, Pages teaches an automatic control function embedded in the flight

control computer 13 (fig.4) (col.5, lines 43-52). Although the control computer 13 (fig.4) of

Pages includes calculating the control path, the parameter for the actuator, and the instruction for

display 18, all the calculating from the control computer 13 (fig.4) serve as only one function

which is to provide autopiloting to the aircraft.

As per claim 7, since Trikha teaches a flight control computer using either the input from

the autopilot or the manual control for determining desired actuator surface commands (col.3,

lines 7-24), the inputs from the automatic device and from the manual device would obviously

correspond in nature so that alternate input data can be used in determining the actuator surface

command.

As per claim 8-10, Trikha teaches providing control instructions including desired change

in the aircraft flight path (col.3, lines 7-10), Leslie teaches providing pitch command to the flight

control computer (col.4, lines 21-26), further, using vertical load factor, roll rate, yaw as

parameters reflecting the flight path would have been well known. It would have been obvious

to a person of ordinary skill in the art at the time the invention was made to use parameters such

as vertical load factor, roll rate, and yaw as indication in the change of the flight path in the

system of Pages in order to facilitate calculating desired control to the airplane surfaces using the

direct control parameters such as the vertical load factor, etc.

As per claim 12-30, refer to claims 1-11 above. Further with respect to claim 21,

Although the control computer 13 (fig.4) of Pages includes calculating the control path, the

parameter for the actuator, and the instruction for display 18, all the calculating from the control

computer 13 (fig.4) serve as only one function which is to provide auto-piloting to the aircraft.

Response to Arguments

4.   Applicant's arguments filed on August 31, 2005 and June 30, 2005 have been fully

considered but they are not persuasive.

In response to applicant's argument on page 2, last paragraph to page 3 of the

supplemental response filed on August 31, 2005; and on page 12 of the amendment filed on June

30, 2005, the present application as well as the presently presented independent claims do not

explicitly disclose what the single function the flight control computer performs. The "single

function" is interpreted as the automatic pilot control function, this automatic pilot control

function may includes several activities in the flight control computer such as determining the

flight path, determining parameters for controlling the actuators, etc. Pages teaches that the

computer 13 (fig.4) performs automatic piloting calculating (col.5, line 46), although this

computer 13 (fig.4) makes several calculation activities such as computing the flight path,

computing actuators parameter, etc (col.5, lines 47-51), all the calculation activities serves for a

single function that is: "the automatic piloting function" as it's name suggests. Moreover,

separating activities or function into different controller to enhance the speed of the processing
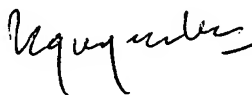
requires only routine skill in the art.

In response to applicant's argument on page 11, first paragraph of the amendment filed on June 30, 2005, it is noted that independent claims do not disclose that the navigation computer computes the specific pilot instructions such as the vertical load, roll, yaw corresponding the path it has already supplied with as asserted. Moreover, Leslie teaches providing at least the altitude, and pitch command to the flight control computer 14 (fig.1) (col.4, lines 19-26, lines 38-41).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (571) 272-6967. The examiner can normally be reached on T-F (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 11, 2005

THU V. NGUYEN
PRIMARY EXAMINER